UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Rey 1459

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

26694 7590 03/18/2009

VENABLE LLP P.O. BOX 34385

WASHINGTON, DC 20043-9998

EXAMINER

JAMAL, ALEXANDER

PAPER NUMBER

ART UNIT

DATE MAILED: 03/18/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/577,989	05/03/2006	Masashi Takada	31869-230505	5197	
TITLE OF INVENTION: ECHO CANCELLER					

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/18/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

appropriate. All further indicated unless corrects maintenance fee notifica	correspondence includir ed below or directed oth	or transmitting the 1880 ig the Patent, advance of nerwise in Block 1, by (rders and notification of r a) specifying a new corres	naintenance fees will pondence address; a	be mailed to the current nd/or (b) indicating a sepa	correspondence address as arate "FEE ADDRESS" for
CURRENT CORRESPOND	ENCE ADDRESS (Note: Use Bi	iock 1 for any change of address)	Note Feel paps have	e: A certificate of ma (s) Transmittal. This ders. Each additional p e its own certificate of	ailing can only be used for certificate cannot be used leaper, such as an assignment finailing or transmission.	or domestic mailings of the for any other accompanying ant or formal drawing, must
VENABLE LI P.O. BOX 3438: WASHINGTON		V2009		Certif	icate of Mailing or Trans	
						(Depositor's name)
						(Signature)
						(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR	Α	TTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,989 TITLE OF INVENTION	05/03/2006 EECHO CANCELLER		Masashi Takada		31869-230505	5197
APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE I	EE TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/18/2009
EXAM	IINER	ART UNIT	CLASS-SUBCLASS	1		
JAMAL, AL	EXANDER	2614	379-406080	,		
"Fee Address" ind PTO/SB/47; Rev 03-0 Number is required. 3. ASSIGNEE NAME A	ondence address (or Cha 8/122) attached. ication (or "Fee Address 12 or more recent) attach ND RESIDENCE DATZ less an assignce is ident h in 37 CFR 3.11. Comp	inge of Correspondence "Indication form and. Use of a Customer A TO BE PRINTED ON	2. For printing on the p (1) the names of up to or agents OR, alternati (2) the name of a sign registered attorney or a 2 registered patient will be listed, no name will be THE PATENT (print or typ data will appear on the p T a substitute for filing an (B) RESIDENCE: (CTTY)	3 registered patent a vely, e firm (having as a m ugent) and the names meys or agents. If no printed. be) atent. If an assignee assignment.	sember a 2	ocument has been filed for
Please check the appropr	iate assignee category or	categories (will not be po	rinted on the patent):	Individual 🗖 Corp	oration or other private gr	oup entity Government
Advance Order -	wo small entity discount p	permitted)	b. Payment of Fee(s): (Plea A check is enclosed. Payment by credit car The Director is hereby overpayment, to Depo	d. Form PTO-2038 is	s attached.	shown above) ficiency, or credit any n extra copy of this form).
- 11	s SMALL ENTITY state	as. See 37 CFR 1.27.			ENTITY status. See 37 C	
NOTE: The Issue Fee an interest as shown by the	d Publication Fee (if req records of the United Sta	uired) will not be accepte tes Patent and Trademark	d from anyone other than t Office.	he applicant; a registe	ered attorney or agent; or the	ne assignee or other party in
Authorized Signature				Date		
Typed or printed name				Registration No.		
This collection of inform an application. Confiden submitting the complete this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223	nation is required by 37 C tiality is governed by 35 d application form to the ions for reducing this but 'irginia 22313-1450. DC k13-1450.	CFR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR	on is required to obtain or r 1.14. This collection is est r depending upon the indiv e Chief Information Office COMPLETED FORMS TO	etain a benefit by the imated to take 12 min idual case. Any comer, U.S. Patent and Tr D THIS ADDRESS.	public which is to file (an nutes to complete, includir ments on the amount of ti ademark Office, U.S. Dep SEND TO: Commissioner	d by the USPTO to process) ig gathering, preparing, and me you require to complete artment of Commerce, P.O. for Patents, P.O. Box 1450,

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

DATE MAILED: 03/18/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/577,989	05/03/2006	Masashi Takada	31869-230505 5197		
26694	7590 03/18/2009		EXAMINER		
VENABLE LLP			JAMAL, ALEXANDER		
P.O. BOX 34385			ART UNIT	PAPER NUMBER	
WASHINGTON, DC 20043-9998			2614		

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 455 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 455 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Application No. Applicant(s) 10/577.989 TAKADA, MASASHI Notice of Allowability Examiner Art Unit ALEXANDER JAMAL 2614 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. This communication is responsive to amendment 12-30-2008. 2. The allowed claim(s) is/are 4-8. 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). b) ☐ Some* c) ☐ None of the: 1. A Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: _____. Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Attachment(s) 1. | Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application 2. Notice of Draftperson's Patent Drawing Review (PTO-948) Interview Summary (PTO-413), Paper No./Mail Date Information Disclosure Statements (PTO/SB/08). 7. Examiner's Amendment/Comment Paper No./Mail Date 4. T Examiner's Comment Regarding Requirement for Deposit 8. X Examiner's Statement of Reasons for Allowance of Biological Material 9. ☐ Other . /Alexander Jamal/

Primary Examiner, Art Unit 2614

Application/Control Number: 10/577,989 Page 2

Art Unit: 2614

DETAILED ACTION

Response to Applicant's Amendment

 Based upon the submitted amendments, examiner notes that claims 4,8 have been amended and claims 1-3 are cancelled.

Examiner withdraws all rejections to all claims.

Allowable Subject Matter

- 3. Claims 4-8 are allowed over the prior art of record
- 4. The following is an examiner's statement of reasons for allowance:

In the examiner's opinion, it would not have been obvious to a person of ordinary skill in the art to provide three variable filters situated as claimed, with each filter being varied specifically based upon the tap length (a result obtained by detecting the second band component) in prior art echo cancellers such as those disclosed by Natarajan and He.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498. The examiner can normally be reached on M-F 9AM-6PM.

Art Unit: 2614

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Curtis A Kuntz can be reached on 571-272-7499. The fax phone numbers for the organization $\,$

where this application or proceeding is assigned are 571-273-8300 for regular communications

and 571-273-8300 for After Final communications.

/Alexander Jamal/

Primary Examiner, Art Unit 2614

Examiner Alexander Jamal

March 18, 2009